

ROYAL COMMISSION
ON
AGRICULTURE IN INDIA

INTRODUCTION
TO
VOLUME XIII

EVIDENCE
TAKEN IN
BIHAR AND ORISSA



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falling at night in Bihar and Chota Nagpur to about 51° and in Orissa to 57° . The cold weather in Orissa is very short and less marked than elsewhere. Frost occurs occasionally in the Chota Nagpur plateau of sufficient severity to do considerable damage to plantations of *sal*, etc., but is rare elsewhere in the province.

In regard to the character of the soil, the province has two well defined types: the alluvial tracts, covering practically the whole of Bihar and the coast fringe of Orissa, and the gneissic tracts. Laterite soils are also met with in patches sloping upwards from the alluvium of Orissa towards the interior of the province and forming patches overlying the general gneissic soils of the Chota Nagpur plateau. Except in the Mahanadi delta and the great river beds, practically all the alluvium is of the older type which, generally speaking, consists of alternating beds of sand and clay and, north of the Ganges, frequently contains large quantities of *kankar*, that is, nodules of carbonate of lime. From the agricultural point of view, the chief interest is the extraordinary range of differences in the surface quality of this older alluvium due partly to differences in level but partly also to general differences in chemical and physical composition. In the district of Tirhut, in which the Pusa Research Station is situated, the texture of the soil and its retentiveness of moisture is, so far as is known, unique. The general characteristic of the new alluvium is that it is richer than the older alluvia in plant food, particularly in nitrogen. Most crops do well on the alluvial soils; rice is grown extensively whenever the supply of water is adequate and, where it is not, fruits and vegetables are extensively grown with the assistance of well irrigation; sugarcane does well on the alluvium when the surface is either clay or loam; tobacco and maize are crops especially suited for the lighter loam; and members of the gourd family are extensively grown along the sandy beds of the rivers.

In the gneissic area of the Chota Nagpur plateau with its extension into southern Bihar, the soil has been formed *in situ* from the break down of the crystalline rock composed of quartz, felspar and mica. Terracing has resulted in the formation of much valuable rice land and, in the depressions between the ridges, a good deal of rice is grown. Other crops are maize, millets, oil-seeds and pulses.

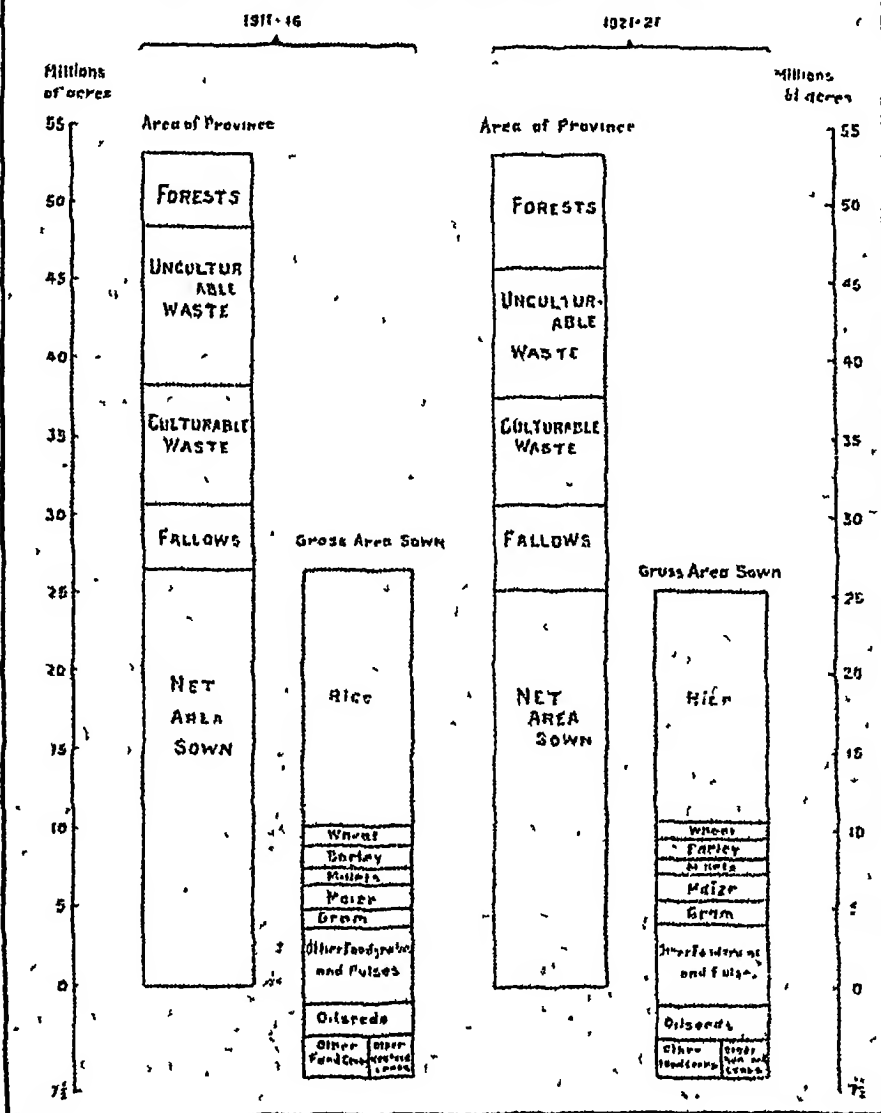
The laterite soils, varying from a conglomerate mass of haematite nodules and coarse quartz sand to loose gravel and sandy clay, are agriculturally of no importance.

The importance of rice as a crop has already been referred to and the place which it takes among the other principal crops of the province is shown by the accompanying diagram; it is grown throughout the province. Of the cereals, maize, barley, wheat and *marua* (*Eleusine coracana*) are next in importance to rice in regard to the area which they occupy, which is, however, only some 5,000,000 acres as compared with about 14,000,000 acres under rice. The maize, barley and wheat are grown chiefly in Bihar and in the low hills in the south and east. *Marua* is also grown in Bihar but its especial area is the Chota Nagpur plateau where it is the next most important crop to rice. The pulses and other

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CLASSIFICATION OF TOTAL AREA AND AREA UNDER VARIOUS CROPS (5 YEARS AVERAGES)

Note: The difference between the Gross Area Sown and the Net Area Sown represents the area sown more than once.



food grains occupy about 7,000,000 acres. Oil-seeds are also important not only as a crop, but because half of the harvest keeps 35 oil mills going in the province throughout the year. The balance is exported. The total area under oil-seeds (excluding niger) is about 2,000,000 acres, of which linseed occupies forty per cent. Although sugarcane, jute and tobacco occupy only about 700,000 acres they are, with fruits and vegetables which are cultivated on some 600,000 acres, extremely important in the agricultural economy; condiments, chillies, turmeric and ginger are also grown in Bihar and, in the case of chillies, a valuable export trade is done. The oil-seeds, sugarcane, tobacco, jute (practically confined to the Purnea district) and fruits and vegetables are all grown, chiefly in Bihar and very largely in North Bihar. The major part of the cereals, even of rice, is similarly grown in Bihar. The overwhelming importance of Bihar in the agriculture of the province will thus be evident. Coconuts and cashewnuts are important local crops in Orissa.

A periodical census of livestock is taken. The last census was taken in 1925 and did not, except in regard to sheep and goats which are dealt with separately, show any appreciable increase over the census taken in 1920. The figures, excluding sheep and goats, were: 1920, 20·0 millions; 1925, 20·9 millions. In the last census, there were 6·9 million bulls and bullocks, 5·7 million cows, 2·4 million buffaloes and 5·7 million young stock, including young buffaloes. There is particular difficulty in securing accuracy in a cattle census in Bihar and Orissa owing to the continual movement of cattle down into Bengal for sale and across the borders into Nepal for grazing, but at any rate the figures of the last two censuses should be strictly comparable as they were both taken at the same time of year (January).

In 1913, the number of sheep and goats was estimated at 6½ millions; in 1920, the number had fallen to a little over 4 millions owing to the high prices obtainable during the war for meat and hides, and also to the scarcity prevailing in 1919 in the breeding areas; by 1925, these losses had been rather more than made good and sheep and goats were returned at 7 millions. Goats are bred throughout Bihar and there is a constant demand for them from the Calcutta market. Sheep breeding is carried on mainly in Bihar towards the United Provinces side. Sheep are also kept in Chota Nagpur.

2. PROVINCIAL INCOME AND EXPENDITURE.

The permanent settlement of land revenue in 1793, if it is not quite so dominating a feature in the income derived from land revenue as is the case in Bengal, is yet the most important factor in the provincial finances. The incidence per head of land revenue assessment is the lowest of any province in India, lower even than in Bengal. Owing to the fact that the greater part of the Orissa division is temporarily settled, some power of expansion exists as the following figures indicate:—

	1901-02	1911-12	1926-27
	Rs. (lakhs)	Rs. (lakhs)	Rs. (lakhs)
Land Revenue..	143	157	169

But the growing needs of the province obviously cannot be met from this source. Excise revenue shows a marked elasticity, having risen from Rs. 124 lakhs in 1921-22 to Rs. 197 lakhs in 1926-27 and the revenue derived from stamps also shows a satisfactory increase in the same period. Still, the revenue of the province compares very poorly with that of a province like Bombay, which raises three times as much revenue from a population about two-thirds that of Bihar and Orissa. Of any new expenditure permitted by these somewhat meagre resources, the transferred side of Government, which includes the nation building departments of Agriculture, Education, and the Medical and Public Health services, takes an overwhelming proportion. Indeed, in the three years ending 1926-27, the proportion averaged ninety-three per cent.

REVENUE AND EXPENDITURE CHARGED
TO REVENUE

GOVERNMENT OF

(Figures are in

Revenue and Expenditure

Receipt heads	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27
<i>Revenue Receipts</i>						
Principal Heads of Revenue—						
Land Revenue	101	105	100	108	107	160
Excise	121	154	183	176	197	197
Stamps	87	95	96	100	108	107
Forests	9	9	10	11	10	8½
Other heads	10	10	17	10	17	19½
Irrigation	18	17	18	18	23	24
Debt—Interest	3	3	4	5	7	9½
Civil Administration—						
Administration of Justice ..	3	4	4	5	5	5
Jails and Convict Settlements..	5	6	6	5	5	5
Police	1	3	2	2	2	1½
Education	4	4	5	6	6	6
Medical	1	1	3	5	8	5
Public Health .. ..	..	..	..	1	..	..
Agriculture (including Veterinary and Co-operation) ..	1	1	1	2	2	2
Other heads .. ..	..	1	1	1	1	1
Civil Works	7	6	6	8	7	6½
Miscellaneous	7	9	7	0	14	7
Miscellaneous adjustments between Central and Provincial Governments	1	..	½
Total, Revenue Receipts ..	453	494	529	536	579	574

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(lakhs of rupees)

charged to Revenue

Expenditure heads	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27
<i>Expenditure charged to Revenue</i>						
Direct Demands on the Revenue—						
Land Revenue	15	10	10	21	21	21½
Forests	10	7	8	8	7	9
Other heads	18	17	17½	10	32	20½
Capital outlay on Forests charged to Revenue .. ..	..	..	..	..	1	1
Irrigation—Revenue account	21	23	21	26	20	28
Irrigation—Capital Account charged to Revenue	1	1	½	..	..	..
Debt Services—Interest	2½	2	3	3½	3½	2½
Civil Administration—						
General Administration	60	72	71	69	70	72
Administration of Justice	35½	35	35	36½	39	40
Jails and Convict Settlements	14½	18	10	17	17	18
Police	81	80	70	81	82	82½
Education	54	51	62	68	77	91
Medical	17	18	19	20	28	34
Public Health	3	6	8	9	13	11
Agriculture (including Veterinary and Co-operation)	0	0	0	11	11	14
Industries	3	5	0	7	0	8
Other departments	2	1	3	1	½	1
Civil Works	61	50	65	67	74	89
Miscellaneous	38½	43	40	43	45	47
Provincial contribution	10	..	..	..	..	..
Miscellaneous adjustments between Central and Provincial Governments .. ..	..	..	..	..	..	..
Total, Expenditure charged to Revenue	403	403	485	513	555	603

GOVERNMENT OF

(Figures are in

Capital Receipts

Receipt heads	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27
<i>Capital Receipts</i>						
Revenue surplus .. ..	..	31	14	23	24	..
Famine Insurance Fund ..	12	14	12	10	19	16
Appropriation for Reduction or Avoidance of Debt ..	..	..	..	..	..	..
Suspense .. ..	..	4	4	5	1	..
Loans and Advances by Provincial Governments	17	10	7	8	10	5½
Loans between Central and Provincial Governments ..	..	20	7	5	..	..
Advances from Provincial Loans Fund .. ..	..	..	..	..	..	..
Total, Capital Receipts ..	29	85	74	57	54	21½
Opening Balance ..	100	93	113	170	202	224½
Total ..	129	178	217	233	256	240

BIHAR AND ORISSA

lakhs of rupees)

and Expenditure

Expenditure heads	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27
<i>Capital Expenditure</i>						
Revenue Deficit	15	..	..	..	..	31
Payment of commuted value of Pensions .. ..	..	..	..	..	..	2½
Construction of Irrigation Works ..	..	..	—½	..	..	..
Civil Works not charged to Revenue ..	..	..	..	..	..	..
Other Works not charged to Revenue ..	..	..	..	..	..	..
Famine Insurance Fund ..	3	..	1	8	3	7
Appropriation for Reduction or Avoidance of Debt ..	..	..	..	..	..	..
Suspense .. ..	..	4	4½	5	..	1
Loans and Advances by Provincial Governments ..	13	26	31½	13	3	4½
Loans between Central and Provincial Governments ..	5	5	5	5	..	..
Provincial Loans Fund ..	..	..	..	..	25½	7
Total, Capital Expenditure ..	36	35	41	31	31½	53
Closing Balance ..	93	143	176	202	224½	193
Total ..	129	178	217	233	256	246

3. REVENUE ADMINISTRATION AND LAND RECORDS.

For purposes of revenue administration, the province is divided into five divisions, Patna, Tirhut, Bhagalpur, Chota Nagpur and Orissa, with a Commissioner at the head of each, and 21 districts in charge of a Magistrate and Collector or Deputy Commissioner. The unit of revenue administration is the district, and revenue questions which cannot be settled finally by the officer in charge of the district go up (except in respect of Excise and Salt for which there is a special Commissioner) to the Divisional Commissioner and from him, if necessary, to the Board of Revenue, which consists of one member. The Board not only deals with revenue questions, but has, *inter alia*, the very important duty of managing estates under the Court of Wards Act.

For the Orissa Feudatory States there is a special administrative officer designated the Political Agent and Commissioner, who has special revenue and judicial powers.

The main sources of provincial revenue in Bihar and Orissa are land revenue, excise and stamps. The main source of revenue for local self-government is a local cess on the land and on profits from mines, forests, etc.; this is not included in the Table of Provincial Income and Expenditure.

For the present purpose, only land revenue will be referred to. The marked feature in the land revenue system of Bihar and Orissa is the fact that the revenue is fixed in the divisions of Patna, Tirhut, Bhagalpur and Chota Nagpur under the permanent settlement concluded by Lord Cornwallis in 1793. The incidence of land revenue per head of population ($7\frac{1}{2}$ annas) is lower than that of any other province in India—Bengal being next with $10\frac{1}{2}$ annas.

In the permanently settled area of Bihar and Orissa, the feature from an agricultural point of view is the absence of a subordinate revenue staff such as is maintained in temporarily settled areas. The consequence is that much less is known about the state of cultivation and the condition of crops, as reliance has to be placed on district officers and their subordinates who are relatively few in number and, moreover, do not need to obtain such information for the performance of their ordinary duties.

The conditions of this permanent settlement (which confirmed a "decennial" settlement completed in 1791—the first comprehensive settlement undertaken after the succession of the East India Company in 1765 to the Dewani of Bengal, Bihar and Orissa*) were embodied in a proclamation issued on 22nd March, and now known as Regulation I of 1793. It declared that the zamindars, independent talukdars, and other actual proprietors of land with whom the "decennial" settlement had been concluded would be allowed to hold their estates at the same assessment for ever but that "no claims for remission or suspension of rent were to be admitted on any account and lands of proprietors were to be invariably sold for arrears." Proprietors were also declared to have the privilege of transferring their lands without the sanction of Government and partition of estates was freely allowed.

*At that time "Orissa" comprised only a small tract of country now included in the Midnapore district of Bengal.

There has been a long history of attempts on the part of Government to regulate equitably the relations between the zamindars and their tenants. The intention at the time of the permanent settlement was to confer an immunity on the ryots against the enhancement of their rents similar to that which had been granted to the zamindars in respect of their assessment. But this intention was soon lost sight of and, on the contrary, with a view to assisting the zamindars to pay their own fixed land revenue to Government, certain powers over the person and crops of a defaulting ryot were given to them in 1799. In 1859, legislation was passed with the object of giving the ryot some measure of protection; this failed, however, of its purpose and the relations between the zamindar and his tenant in the divisions of Patna, Tirhut and Bhagalpur are now regulated by the Bengal Tenancy Act of 1885. The objects of this Act are: (1) to give the settled ryot the same security in his holding as he enjoyed under the old customary law, (2) to ensure to the landlord a fair share of the increased value of the soil and (3) to lay down rules by which all disputed questions between landlord and tenant can be reduced to simple issues and decided upon equitable principles. Of the various amendments of the Act, the most important are those effected by Act III of 1898 in regard to the preparation of the record of rights and the enhancement and reduction of rent, and by Act I of 1907, which conferred greater authority on the record of rights when duly prepared and published, but the principles of the Act of 1885 remain unaltered and, with the amending legislation, it provides a code governing the most important relations between landlord and tenant. It is in force in ten districts of Bihar. The three districts of Angul, Sambalpur and the Santal Parganas have special Tenancy Acts, as have also Chota Nagpur and the three coastal districts of Orissa. All these Acts provide for a record of rights.

It would be impossible and unprofitable within the limits of the present introduction to enumerate the tenures and sub-tenures intervening between the zamindar and the cultivating ryot which are regulated by this legislation. Suffice it to say that while the majority of the bigger estates remain in the possession of the old zamindari families, the landlords have freely used their powers of alienation not only to create subordinate tenures but also to transfer their estates, and that a considerable part of the area which was permanently settled in 1793 is no longer in the direct possession of the descendants of the original owners.

The temporarily settled tracts consist chiefly of territories acquired subsequent to the permanent settlement. Much the most important of them is the tract which constitutes the Orissa division but there are a number of estates held direct by Government in other divisions, of which the Khurda, Palamanu, Banki and Angul estates are the principal ones. In 1925-26, 329 estates out of 118,907 were held direct by Government* and contributed thirteen per cent of the total land revenue.

* These estates directly held by Government constitute only a small fraction of the total number of estates subject to periodical settlement. In Orissa alone, the number of such estates runs into several thousands and there are several hundreds scattered about the permanently settled tracts of Bihar.

Purchases at revenue sales have gradually extended the temporarily settled areas.

The Orissa Tenancy Act of 1913 replaced for the three districts of Cuttack, Puri and Balasore, the Bengal Tenancy Act which had previously been in force. The object of the Act was identical with that of the Act it superseded, *viz.*, to regulate the relations between landlord and tenant.

Chota Nagpur also has a special Tenancy Act of its own (Act VI of 1908 and subsequent amendments). This Act not merely superseded the previous Acts in force in Chota Nagpur but introduced a number of principles adopted from the Bengal Tenancy Act and set the substantive law regarding the customary rights and usages of the aboriginal ryots on a firm basis. It has been successful in allaying the discontent which, as recently as 1900, manifested itself in an armed rising and has protected the rights of the aboriginal population where these have been endangered by the passage of the estates of indigenous landholders into the hands of ryots, often of the moneylender class.

There is another Act peculiar to this part of the province (The Chota Nagpur Encumbered Estates Act VI of 1876 and subsequent amendments) which was enacted to protect the ancestral estates of the aboriginal landlords who have fallen into debt and to prevent them from being put up to sale.

Land Records and Survey.

A primary object of the framers of the permanent settlement of 1793 was to record all rights in land, but, up to the passing of the Land Registration Act in 1876, the law as to registration was not strictly enforced. The object of the Act of 1876 was not to make an inquisition into titles, but to identify all individuals on whom might be imposed certain duties and obligations in virtue of their being in possession of land as proprietors. Consequently, every person in possession of land, whether revenue-paying or revenue-free, is required to register full particulars. But such registration does not deal with subordinate rights and interests. For several years after the permanent settlement, endeavours were made to maintain a record of these through subordinate officials but without success. At length, however, a procedure was devised under the Bengal Tenancy Act of 1885 for obtaining in a complete form a record of rights of all interests in the land. 1925-26 marked the completion of the record of rights for the whole of Bihar and Orissa, except for a few small isolated areas. The Administration Report of the province for that year observes that "It is difficult to exaggerate the benefit which these operations have brought to landlord and tenant alike, to say nothing of the general public and the administration of the province. . . . District officers report, year by year, that the record is freely used. . . ." The continued value of such a record is dependent on its being kept up to date by successive revisional operations.

4. THE CULTIVATOR.

Bihar and Orissa supports a population slightly larger than the population of England and Wales on an area nearly twice as large.

The total population of Bihar and Orissa, including the Feudatory States, as recorded at the census of 1921, was about 38 millions, of whom some four per cent only lived in towns. At this census, 81 centres of population were classified as towns, but six of these contained a population of under 5,000 and of the remainder no less than 35 have a population of between 5,000 and 10,000 only. The proportion of the urban to the rural population has remained practically stationary since 1891.

How predominantly rural Bihar and Orissa is, notwithstanding the existence of the industrial areas in Dhanbad and Singhbhum, is well illustrated by comparing the percentage of the urban population (3·7) with corresponding percentages for the neighbouring provinces. In the Central Provinces, the percentage is 9·0, in the United Provinces 10·6 and in Madras 12·4. There are, in fact, only six centres in Bihar and Orissa with a population of over 50,000, viz., Patna, Gaya, Bhagalpur, Jamshedpur, Darbhanga and Cuttack.

The total population in 1921 showed a slight decrease over the total returned in the census of 1911, which is accounted for mainly by the terrible visitation of influenza in 1918 which was aggravated by severe scarcity.

The population presses heavily on the land in North Bihar, where the mean density rises as high as 907, 872 and 870 per square mile in the Muzaffarpur, Saran and Darbhanga districts, respectively. In the Patna district of South Bihar and the Cuttack district of Orissa also, the population is very dense, 763 and 565 per square mile. On the other hand, the Chota Nagpur plateau is thinly peopled, the mean density being 221 per square mile, and, in the Angul district, there are only 109 persons to the square mile. These figures are for British territory only. The sparsity of the population in the Chota Nagpur division brings Bihar and Orissa as a whole down to the third place among the provinces, below Bengal and the United Provinces.

The rural population of the province lives in 104,239 villages and not in isolated houses on their holdings. The villages vary considerably in population. In Bihar, for example, where, as has been mentioned, the concentration of population is greater than anywhere else in India, 14,160 villages in the Tirhut division accommodate 9,688,892 people, or an average population of 680 for a village, whereas in Chota Nagpur the average population of a village falls to 280. Village administration varies in the different parts of the province. In the permanently settled tracts of Bihar, there is no village organisation, the real unit being the family, and the landlord and his agent take little interest in the general welfare of the village. In the aboriginal villages of the Chota Nagpur plateau, in the Santal Parganas and in the government estates in Orissa, on the other hand, the village headman is an official of real authority in the village, and manages all its relations with the outside world. In the Santal Parganas, this office is usually, but not necessarily, hereditary. But whatever the organisation of the village may be, it is generally true to say that there is usually no sanitation. Information regarding the health of the population will be found in the last section of this

introduction under Public Health and Sanitation, and information in regard to village roads under Communications and Marketing.

Holdings are small, but exhibit a good deal of variation in gross area. Thus, in the two most thickly populated districts of North Bihar, where the population is nearly 900 to the square mile, the average amount of cultivable land per household is estimated to be 5 acres, whereas in Chota Nagpur the average rises to $11\frac{3}{4}$ acres and, in Orissa, is 9 acres. If, however, account is taken of the fact that double cropping is the rule rather than the exception in North Bihar, that in Chota Nagpur a large, and in Orissa a smaller but still substantial, proportion of the holding is not sown every year, the net or effective holding throughout Bihar and Orissa is uniform at something between six and seven acres. Fragmentation of these holdings is almost universal. It is worst in the Patna, Saran and Darbhanga districts of Bihar and in Orissa, where the average size of the 'fragments' into which the holdings are divided is no more than two-fifths of an acre and it will commonly take a cultivator an hour merely to go the round of all the fragments which comprise his holding. The waste of time and labour which is the most obvious evil of fragmentation is mitigated by the very general practice of combination among neighbouring cultivators to grow their crops in comparatively large blocks on a basis of payment in shares of the produce.

The actual cultivators of the land were estimated in the census of 1921 to number nearly ten millions and, of these, about one million were returned as having subsidiary occupations not obviously agricultural. These occupations include peddling, coal, iron and mica mining, weaving, smithy-work, carpentry and pottery, leather work, fishing and employment as general labourers.

The cultivation in the province varies greatly with the different races, climates and soils of the districts. The best cultivators are to be found in the Saran district of Bihar where the climate is good and the people intelligent, hardy and energetic. Pre-eminent among these are the *koeris* (vegetable gardeners).

The cultivation in Chota Nagpur is, throughout, very inferior to that in Bihar, although there are marked differences within the division itself. But the soil is generally too poor, the population too sparse and the attraction to the industrial centres in the division too great to make practicable even an approximation to the close and careful cultivation which prevails in North Bihar.

The cultivation in the Orissa division falls into two well marked areas. In the west, in the Sambalpur district, conditions are similar to those in the Central Provinces. The cultivators are fairly prosperous, but the standard of cultivation does not reach so high a level as in Bihar, though it is greatly superior to the average cultivation in Chota Nagpur. In the east of the Orissa division, that is, in Orissa proper, the soil in the inland tracts is rich, the climate favourable and the cultivator intelligent. Excellent crops of rice are accordingly obtained in many parts of the district, and the evidence of good cultivation is seen in the ability of this part of the

province to sustain a large population; in the district of Cuttack the population reaches a density of 565 to the square mile.

This brief description takes no account of certain parts of the province where special conditions prevail, such as the Santal Parganas and the district round Ranchi where there are a fair number of aborigines. The cultivation in these special districts varies considerably. In some parts, it is extremely good and, in others, it is little more than occasional cultivation of the jungle type.

Below the peasant cultivators come the landless labourers who number some $2\frac{1}{4}$ millions apart from their dependants. Wages are still moderate, though they have risen very considerably since the war, and the landless labourer is in consequence better off and more independent than he used to be.

In the reports on the last settlements of the Hazaribagh and Palamau districts of Chota Nagpur, unfavourable comment is made on the tendency for these landless labourers to become permanently attached to a master. In return for a loan received, such men bind themselves to perform whatever menial services may be required of them in lieu of paying interest on the loan and in consequence lose their status as free labourers.

Seasonal migration is a striking feature in North Bihar. It begins in November and is at its height after the winter rice crop has been reaped in December; the return begins about March-April. The migrants are often accompanied by their families. Crop cutting in northern Bengal is a special attraction for the family party, as the labour of the women and children is a useful asset. But trade, domestic and factory service, and day labouring and carting absorb many into Calcutta. Many others scatter all over Bengal, often plying the business proper to their caste, as cobblers, boatmen, earthworkers, etc. Most of the coolies at the bigger railway stations of western Bengal come from Bihar and Orissa. South Bihar shares in this periodic migration as does also Orissa, migrants from these two areas going mostly to Calcutta. Chota Nagpur also sends large numbers to the coal fields and to the tea gardens in the Duars for periods of from two to six months.

Emigration of a more permanent nature takes place from all three divisions of the province—Bihar, Chota Nagpur and Orissa—largely to the tea gardens in the Duars and in Assam. Emigration from Chota Nagpur to Assam is specially marked, but it is not as a rule permanent, men and their families going for periods of from two to five years.

In the census of 1921, nearly 2,000,000 were enumerated in other parts of India as having been born in the province or equivalent to five per cent of the population of Bihar and Orissa. The census is taken at a time of year (March) when the seasonal migrants are just beginning to return. The census returns do not distinguish between seasonal migration and the longer periods of emigration. As compared with the census of 1911, emigration (which includes seasonal migration) in 1921 showed a decline in both North and South Bihar, but a very great increase in the case of Orissa which was doubtless a reflexion of the

scarcity which occurred in the Puri district in 1920. Emigration from the Chota Nagpur plateau had also greatly increased for similar reasons.

The factors which most affect the well-being of the rural population of Bihar and Orissa are, however, after all neither migration nor access to industrial employment. Those employed in the iron and steel trade, in the 35 oil mills, the 22 tobacco factories and the 15 large sugar mills which the province maintains and the workers in the lac industry are an insignificant fraction of the total population. Agriculture remains the sole means of livelihood for the greater part of the inhabitants of the province.

Factors of real importance to the cultivator are the sources from which he obtains the finance indispensable for carrying out his cultivation, and his ability intelligently to use that finance. At present, these sources of finance are the *mahajan* and the co-operative credit society. Government also provide facilities for borrowing under the Land Improvement Loans Act of 1883, but little use is made of these facilities. No estimate of the finance annually required to carry on cultivation in the province has, as yet, been made, but it is certain that it must amount to many crores of rupees. It is, therefore, equally clear that land improvement loans which amount on an average to Rs. 40,000 a year and loans from co-operative sources, which in 1926 amounted to Rs. 66 lakhs, do not, between them, make any effective impression on the *mahajan's* monopoly.

If the spread of primary education is the essential preliminary to the wide extension of a sound co-operative credit system, as it is now in fact universally admitted to be, it is certain that education and a sound system of financing the growing and the harvesting of crops are both essential preliminaries to the improvement of marketing on any large scale. Unfortunately, there is still almost everything to do in spreading a knowledge of reading, writing and simple arithmetic among the people. In the census of 1921, only 12·6 of the men and 0·7 per cent of the women of twenty years of age and over were returned as literate and, although literacy had increased to some extent since the census of 1911*, the rate of increase clearly allows no hope whatever of any early general attainment of literacy. The position in regard to literacy is further dealt with in the section on Education below.

5. THE AGRICULTURAL DEPARTMENT.

Since the closing of the Agricultural College at Sabour in 1923, there has been no educational centre in Bihar and Orissa at which the research and experimental work of the Agricultural Department could be prosecuted. The Director of Agriculture has his headquarters at Sabour where one of the five central experimental farms of the province is situated. Here also the botanical and chemical work of the department is carried out under the supervision of the Director and the agricultural engineer is stationed.

* Literate (aged 20 and over)	1911		1921	
	Males	Females	Males	Females
	11·4	0·4	12·6	0·7

The general agricultural policy in the province since 1923 has been one of decentralisation and, for administrative purposes, the province is divided into four ranges, North Bihar, South Bihar, Chota Nagpur and Orissa, each under a deputy director. North Bihar and South Bihar have, however, been found to be too big for a single deputy director's charge and the eastern sections of each of these two ranges have, therefore, been placed under an assistant director responsible to the Director. It is contemplated ultimately to have seven ranges and the administrative approval of Government has already been obtained to the establishment of a fifth range for the Santal Parganas in south-east Bihar.

These arrangements are the outcome of the report of an agricultural committee in 1922 which was chiefly composed of members of the Legislative Council and included the Agricultural Adviser to the Government of India. The committee was convened in consequence of the attitude of the legislature towards a scheme for reorganising the department which included the retention of the Agricultural College at Sabour, the development of farms and the establishment of a sugarcane station in North Bihar.

The organisation within each range is based on a central experimental farm. These farms are at Sepaya (379 acres) for North Bihar, Sabour (190 acres) and Gaya (193 acres) for South Bihar, Ranchi (340 acres) for Chota Nagpur and Cuttack (150 acres) for Orissa. Of these, the Cuttack farm, which was started in 1904, is the oldest; the farm at Sabour dates from 1906, the Sepaya and Ranchi farms from 1913-14 and the Gaya farm from 1924. The ranges are necessarily of very considerable extent. The Chota Nagpur range is, for example, 200 miles from north, to south and east to west, and if the other ranges are less extensive, the population is far greater. An organisation confined to one farm could not, in such circumstances, distribute in an effective manner the results of its research work among the cultivators and the agricultural committee of 1922 accordingly recommended the establishment of a small farm in each of the sixty-four subdivisions as a centre for disseminating improvements in that area. Eight such farms already existed at the date of the committee's report, viz.: Jamui and Nawadah in South Bihar; Purulia, Ramgarh and Netarhat in Chota Nagpur; and Sambalpur, Balasore and Khurda in Orissa. Since that date, seven more subdivisional farms have been started: Sewan and Darbhanga in North Bihar; Bikramganj and Siris in South Bihar; Chaibasa in Chota Nagpur; and Anandpur and Angul in Orissa. With fifteen subdivisional farms started and three more under construction out of a programme for sixty-four, there is clearly much to be done. The proposed provision for five more farms had to be omitted from the budget of 1927-28 owing to lack of funds. The farms vary in size but, with the exception, of Netarhat and Nawadah, all of them are under 50 acres. The area of the Netarhat farm is 193 acres and that of Nawadah 67 acres.

While the organisation of the department is thus based on these farms, the methods of work adopted in the different ranges are not quite uniform. In Bihar, where farms are still very few and the cultivation very close, experiments are made on cultivators' fields and there is widespread

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propaganda, in which the co-operative movement takes its share, based on the results. In Orissa, the five subdivisional farms provide a surer basis for demonstration on a similar scale and by similar means. In Chota Nagpur, where the area is large, there has been as yet very little propaganda and the subdivisional farms are only four in number; a start has, however, now been made with propaganda in this area.

The staff of the department consists of officers of the Imperial Agricultural Service, recruitment for which has now ceased, officers of the Provincial Agricultural Service and the Subordinate Service. There are five Imperial Agricultural Service officers, the Director and four deputy directors in charge of the four ranges, and an agricultural engineer recruited on a temporary agreement. There are ten Provincial Service officers; of these, six are assistant directors, two of whom are in independent charge of the east-south and east-north Bihar ranges under the Director of Agriculture and four work as assistants to the deputy directors. Of the remaining four provincial officers, two are agricultural chemists, one is an assistant professor of mycology officiating as economic botanist and the fourth is superintendent of the Monghyr dairy farm. The Subordinate Service is divided into three grades, a small upper grade on Rs. 150—10—200, with two posts on Rs. 225 and one on Rs. 250, consisting of managers of the central farms and probationers for the Provincial Service, a middle grade on Rs. 60—5—150 and a lower grade on Rs. 30—2—60—4—100. Recruits who have passed the intermediate university standard start on Rs. 45 and ordinary matriculates start on Rs. 35. Staff is undoubtedly the greatest difficulty at present in the way of developing the activities of the Agricultural Department. There is now no agricultural chemist or economic botanist belonging to the Imperial Agricultural Service. The work of the agricultural chemist is now being done by the former assistant professor of chemistry and that of the economic botanist by the former assistant professor of mycology at the Sabour College. Both these officers work under the supervision of the Director. All entomological and mycological problems have to be referred to Pusa. The Government of Bihar and Orissa propose to make provision for an agricultural chemist and an economic botanist in the new Superior Provincial Service which is to replace the Imperial Agricultural Service, but it is intended to continue to rely on Pusa in the sphere of entomology and mycology. As regards provincial staff, the intention at present is to recruit men who have taken degrees with honours in science from the universities and to give them a practical agricultural training at the central farms at Sabour, Cuttack, Ranchi and Sepaya, under the deputy directors. A graduate who took honours in science at the University of Patna was recruited in this way in 1924. The subordinate staff is trained on the agricultural farms, mainly at the four central farms, but training in agriculture is necessarily slow, and the work at the central and existing subdivisional farms is being carried on under serious disabilities, so much so that the Director in his report for 1925-26 stated that it had become "necessary to check the expansion of the work outside the central and existing subdivisional farms in order to give more

attention to the training of the subordinate staff on these farms and to the work in progress on them."

The work done on crops by the Agricultural Department for the cultivator may best be shown by a brief summary of the principal activities of the four central farms:

Sabour.—Here the crops under study are chiefly sugarcane, potatoes and vegetables. The farm is run by recruits on probation. The installation of two tube wells in addition to percolation wells enables the greater part of the farm to be irrigated.

Cuttack.—Although the work of the department has been longer established here than elsewhere in the province, the only considerable success so far attained has been with rice. The seed of two prolific and early yielding varieties and one prolific and late yielding variety is now in process of distribution. Ten thousand pounds of seed were distributed free by co-operative societies in 1925-26 for demonstration purposes. Green manuring has also spread in the Orissa delta. Of one important problem in the delta, *viz.*, the crops which can best be grown in the cold weather on land where rice has been destroyed by floods, no decisive solution has been found but the experiments with linseed and *juar* are hopeful.

Ranchi.—Apart from cattle breeding which will be described later, the work on this farm and the small subdivisional farms linked with it consists chiefly in varietal experiments with rice and the growing of groundnut for distribution and of sugarcane on drained rice land for experimental and demonstration purposes.

Sepaya.—Apart from the earlier activities in regard to cattle breeding, useful work is being done in popularising Coimbatore cane No. 210, while tobacco growing experiments have resulted in the rapid spread of the crop in the Saran district where it was almost unknown before.

The greatest success so far achieved with the introduction of an improved variety is not, however, connected with any one farm. It is the introduction of *dahia* rice, which is an early and heavy yielder, and, by 1924-25, had spread over about 23,000 acres in South Bhagalpur, South Monghyr and the Santal Parganas in South-East Bihar. Since that year, there has been a further increase in this area sown with this variety. The cultivation of groundnut has also been taken up on a considerable scale in the Patna division as the result of departmental demonstration.

Attention is being paid in all four ranges to manuring; in particular, the use of gypsum has been introduced on a considerable scale in South Bihar. Experiments are also being conducted on the farms to determine the value of different types of phosphatic manure and the possibility of a great demand in the near future for this and other kinds of fertilisers is foreseen as the result of the tests already made by the Agricultural Department and of the organised propaganda which has now been begun by sellers of artificial manures on the basis of these tests.

Important experiments have also begun at the Purnea* farm in North-East Bihar into the relative values of different varieties of jute for local cropping.

Agricultural engineering.—The Agricultural Engineer has a workshop at Sabour which is also his headquarters. Research on water-lifts is conducted there and there is so great a demand for the *rahat* pumps (iron Persian wheels) that arrangements are being made to have them manufactured by private firms, as the workshop cannot meet the demand and it is also hoped that manufacture by private agency will enable the pump to be sold cheaper. Repairs to farm implements, machinery and boring plant are also carried out at the workshop at which, as far as possible, all boring appliances are also manufactured. Experiments are also being made with *gur* furnaces and cane mills. But the main duty of the Agricultural Engineer is well boring. There is a considerable demand from cultivators for borings in ordinary wells and orders for tube wells with strainers are now being received. There were in all 201 such applications in 1926-27. The staff of the Agricultural Engineer has been strengthened by the appointment of an assistant engineer and three separate sections have been constituted for the three alluvial tracts, each under a supervisor, *viz.*, one in North and one in South Bihar and a third in Orissa.

The Agricultural Engineer is also responsible for small *bunds* in South Bhagalpur division. A typical scheme is the one carried out at Koilwa in 1925-26 which will control 200 acres. These *bunds* combined with drainage are of especial importance in Chota Nagpur. It is, as the Report of the Agricultural Department for 1925-26 remarks, "the one direction in which a really great advance seems possible in Chota Nagpur—the retention of the monsoon rainfall at a high elevation above the paddy land and the drainage of the lowest paddy land for sugarcane and garden crops."

6. LIVESTOCK WORK AND THE VETERINARY DEPARTMENT.

Both oxen and buffaloes, especially the former, are a very important feature of agriculture in Bihar and Orissa, as not only are they required in large numbers for agricultural operations within the province but, with the assistance derived from the neighbouring pastures of Nepal, there is a large annual export to Bengal. A comparison of the census of 1920 with that of 1925, yields the following results:—

	1920	1925	Increase or decrease
Bullocks	6,256,310	6,826,415	570,105
Cows	5,617,449	5,751,480	134,031
Young stock	4,482,405	4,653,065	170,660
Male buffaloes	802,570	826,599	24,029
She buffaloes	1,515,301	1,555,441	40,140
Young stock	1,038,168	1,022,221	— 15,947
	19,712,203	20,635,221	923,018

* This farm of 190 acres is privately owned by the Tournament Trust Committee, but is controlled by the department.

Various attempts have been made in the past, notably at the Sepaya farm, to improve the breeds of cattle, but so far, with little result. Continuity of policy has been lacking and as the distribution of bulls and male buffaloes has been made on no settled plan, any good that might have been effected has been dissipated. Although dairy herds have been maintained at the Sabour and Ranchi farms and a third herd has recently been established at the Monghyr farm on the advice of the Agricultural Committee of 1922, nothing has been done to improve draught cattle since the abolition of the breeding herd at Sepaya in 1922. A cattle committee was appointed in 1925 to consider the state of cattle breeding in the province generally. The committee reported in favour of breeding a dual purpose animal and their recommendations that a large breeding farm should be established at Patna under the Veterinary Department, that a breeding herd should be attached to the Cuttack farm in Orissa and that a herd of Murrah buffaloes should be maintained at Sepaya farm have all been approved. The Veterinary Department will, therefore, henceforward, have an interest in breeding. Hitherto, breeding operations have been entirely conducted by the Agricultural Department, but the local Government are now disposed to think that livestock and dairying work should be brought as far as possible under the control of the Veterinary Department and they have decided that the present Director, Civil Veterinary Department, should combine the duties of livestock officer with that of Director. Sheep and goats are both important elements in the livestock of the province, numbering, as they do, 1,239,000 and 5,765,000 respectively, but so far no attempt has been made to improve their breeds.

The Civil Veterinary Department was separated from the Agricultural Department in 1920. For the purpose of administration, the whole province is divided into three ranges, North, Central and South. The first is in charge of a deputy director, who, like the Director, is a member of the Imperial Veterinary Service, recruitment for which has now ceased. The third was also in charge of an officer of the Imperial Veterinary Service, but the vacancy which arose on his death has been filled by the appointment of an officer of the Provincial Veterinary Service. As the Director has now taken up the additional duty of livestock officer, it is necessary to relieve him of the Central range which is at present under his direct charge and to appoint a third deputy director. At present, there are only three officers in the Bihar and Orissa Provincial Veterinary Service, two assistant directors on Rs. 250—50—750 per month and an officer who, after obtaining a veterinary degree in England, is now taking a post-graduate course at Muktesar and has been appointed temporarily for a year on a special rate of pay of Rs. 300 per month pending a decision as to the formation of the new Superior Provincial Service to take the place of the Imperial Veterinary Service.

Owing to the comparatively recent origin of the department and the shortage of staff, its activities have in the past been chiefly concentrated on the control of contagious diseases. The charge of the new breeding centre at Patna and still more the decision to create a veterinary

college, with its opportunities for prosecuting research, will greatly widen its outlook. At present, any investigation beyond the resources of the three small laboratories, one for each range, has to be referred to Muktesar.

Hitherto, the subordinate veterinary officers have been trained at the Bengal Veterinary College. The new college, which will be at Patna, will be run in connection with the proposed cattle breeding and dairy farm there. The students will thus have an opportunity of getting an insight into animal husbandry and dairying which no other veterinary college in India provides. It is intended to start with a three years' course only, in view of present financial conditions, but the advantages of a four years' course and of affiliation to Patna University, which the extra year will make possible, will not be lost sight of. The college will not supply recruits for the new Superior Provincial Veterinary Service. The intention at present is to obtain these recruits from among students sent to England who return with a veterinary degree.

The subordinate staff consists of 124 veterinary assistant surgeons, 13 inspectors of the work of these assistants, 18 staff and reserve inspectors, 4 laboratory assistants and 1 cruelty inspector employed by the Patna Municipality. The veterinary assistant surgeons are on a scale of Rs. 50—10—125 with certain allowances; three of the laboratory assistants receive Rs. 100-125 per month and the fourth is on Rs. 60-80 per month. The cruelty inspector is on a special scale of Rs. 100 per month and is appointed temporarily for three years in the first instance.

The veterinary assistants are government servants but work under the district boards. They are paid by Government, the district boards making a contribution to Government in respect of their pay (five-sixths in the case of the stationary and one-half in the case of the touring assistants). The assistants are partly touring and partly stationary. The intention is to have one fixed hospital, in charge of an assistant, in each subdivision and two touring assistants. As there are 63 subdivisions and only 27 stationary and 97 touring assistants, the staff is by no means complete, but many district boards are reported to be genuinely unable to do more than they do at present. But undoubtedly the proportion of their expenditure on veterinary matters to their total receipts and to their expenditure on education and medicine is disappointingly low. Thus, no district board in 1925-26 spent more than two per cent of its total receipts on veterinary work (including the cost of sera and vaccine) and no fewer than nine out of the twenty boards which sent in returns spent less than one per cent. On education, on the other hand, no board spent less than ten per cent or on medicine less than four per cent of its total receipts.

Inoculation against rinderpest, hæmorrhagic septicæmia, anthrax and black quarter is carried out. In 1926-27, the total inoculations were 147,731 and in the preceding year, 170,153. The marked difference between the two years was due to the abnormally low incidence of rinderpest in 1926-27. Inoculation by the simultaneous method has

not so far been employed. In 1926-27, 3,915 in-cases and 42,421 out-patients were treated and 1,612 castrations were performed in the veterinary hospitals. In the same year, the travelling dispensaries performed 1,119 castrations and treated 38,821 animals for contagious, and 69,247 animals for non-contagious, diseases.

7. IRRIGATION.

In 1926-27, the area irrigated from all sources amounted to 5,301,835 acres, or about eighteen per cent of the total area sown. Of this area, no less than 3,584,000 acres were under rice and practically all the remaining acreage irrigated was under food crops of one kind or another.

The sources of irrigation are various ; 1,832,576 acres are irrigated by canals, nearly half of which are privately owned, 1,591,171 acres and 620,197 acres are irrigated by tanks and wells respectively and 1,257,391 acres derive their water from various sources, the chief of which is the impounding of flood water by temporary *bunds*.

The major part of the large area irrigated by privately owned works is situated in the Gaya district and in the southern portion of the Patna district. These irrigation works are maintained by the landlords, and, as a rule, the rents are paid in kind and not in cash. This brings in a large return to the landlord on the capital which he expends on irrigation. The tenants as a class tend to apply for a commutation of their produce rents into cash rents. This commutation it is within the power of Government to grant. But Government have to consider that the tenants owing to their inability to combine among themselves are, as a class, unable to keep up the irrigation works, so that general commutation throughout the district would result in extensive deterioration in cultivation.

The government canals are in the north and south-east of the province. In the north are the Son, Tribeni, Dhaka and Teur canals : in the south-east are the Orissa canals and the Orissa Coast Canal, the latter being for navigation only. There is a separate department for irrigation with a Secretary who is also Chief Engineer at the head of it. There are two local circles of administration—the Son and Orissa, each in charge of a superintending engineer.

The Son canals, which were opened in 1875, take off in two main branches from the river Son, one on the east and one on the west bank of the river. They irrigate an average area of 561,141 acres on the south bank of the Ganges at a capital outlay per acre irrigated of Rs. 48. The interest earned averaged 5.89 per cent for the three years ending 1925-26. The Tribeni, Teur and Dhaka canals all lie to the north of the Ganges and close to the Nepal boundary. The Tribeni Canal was completed in 1912 and irrigates 66,588 acres from the river Gandak at a capital outlay per acre irrigated of Rs. 122. The revenue earned averaged only 0.62 per cent on this outlay for the three years ending 1925-26. The Dhaka Canal was opened in 1907 and provides water for 14,345 acres at a capital outlay of Rs. 42 per acre irrigated and gave

a return of 1·01 per cent over the same period. The Teur Canal irrigates an average area of just over 2,000 acres. It was originally a private irrigation system. Both the Tribeni and the Dhaka canals were constructed as protective works.

The Orissa canals in the south-east date from 1865. Their main function is to protect portions of the Mahanadi delta against flooding. The area protected is 562,114 acres and the cost Rs. 48 per acre. The average area irrigated is only 247,224 acres. For the three years ending 1925-26, these canals returned only 0·48 per cent as interest on capital outlay.

On all these canals, the cultivator is charged for water on an acreage basis and he can enter into a long-term lease at reduced rates or pay for the water by the season and the crop. The details of the arrangements for long leases differ for the different canals, but in no case does the lease cover watering for the whole year. In the case of the Orissa and Son canals, it covers watering from June to March. Waterings required in April, May and part of June for such crops as sugarcane, cotton and indigo have to be paid for as extras. On the Orissa canals, only some 260 acres are not irrigated on the long lease system. Two-thirds of the acreage irrigated by the Son Canal and nearly one-half of the acreage irrigated by the Dhaka Canal are under this system. Long leases are less popular on the Tribeni Canal and cover only three-tenths of the area irrigated. The long lease system shows signs of falling into disfavour on the Son canals.

No schemes for new canals are under consideration and, as will have been observed, there has been no construction since 1912. Extensive additions could advantageously be made to the areas irrigated in Bihar north of the Ganges and such works would incidentally be of service in drainage, but there is little likelihood of development as the head waters of all available rivers lie within Nepal and the necessary control is, therefore, lacking.

The Son and Orissa main canals are open to navigation. Including the Orissa Coast Canal, there are 500 miles of navigable canals in the province.

Of the total area under tanks (1,591,000 acres) and wells (620,000 acres) more than one-half in each case is located in the Patna division.

Wells are a great feature in the cultivation of South Bihar. In this part of the province, the rainfall is too light to admit of rice cultivation on an important scale, but wells make it possible to grow vegetables (including potatoes and onions) and spices. Well irrigation is also utilised for sugarcane and even for wheat. It has been found that the supply from a percolation well can often be greatly increased by driving a 3" tube into lower water-bearing strata. There is a demand for these borings and an even greater demand from zamindars and others for tube wells proper. The engineering section of the Agricultural Department has recently acquired plant for making tube wells. Well irrigation is not as yet practised in Orissa, though a demand for tube wells is now arising and the Agricultural Department have posted a well boring

supervisor to this area. Well irrigation is practised in Chota Nagpur but is unimportant. Where well irrigation is practised on such an extensive scale as it already is in the Patna and Tirhut divisions, the efficiency of water-lift appliances becomes important and there is an increasing demand for iron Persian water wheels.

Outside the Patna division, the largest area irrigated by tanks lies within the Chota Nagpur plateau. The future expansion of irrigation in the province undoubtedly lies with small schemes and, more particularly, with wells, the responsibility for which rests with the Agricultural Department. The engineering section of that department has recently been reorganised and the field work distributed into three sections, North Bihar, South Bihar and Orissa. The iron Persian wheel is being adapted at Sabour to meet local requirements in the way of water-lift as motor water-lift is not considered economical where the capacity of the well is less than 12,000 gallons a day.

River conservancy is confined to the Ganges and is devoted to keeping the river open for navigation during the period of low water from October to May.

8. FORESTRY IN RELATION TO AGRICULTURE.

7,514,743 acres are shown in the Season and Crop Report for 1926-27 as under forests. Of this area, only 2,373,533 acres are under the management of the Forest Department. The forest areas are situated chiefly in the Chota Nagpur division, in the Angul, Puri and Sambalpur districts of Orissa, in the Santal Parganas and in the Champaran district of the Tirhut division.

In 1926-27, grazing was provided in the forests under State management for 63,500 buffaloes, 287,000 cows and bullocks, 55,100 sheep and goats, 5 camels and 35 other animals.

This is, of course, the merest fraction of the total livestock of the province, since the total number of cattle alone in Bihar and Orissa is estimated at 21 millions. The value of free grazing or grazing at reduced rates was, in 1926-27, Rs. 1,17,597. In the same year persons with rights in the forests took away forest produce valued at Rs. 1,43,291. The total grazing and forest concessions in 1926-27 were, therefore, valued at Rs. 2,60,888.

9. GENERAL EDUCATION.

The total expenditure on education at recognised institutions in the province in 1926-27 was 177 lakhs of rupees as compared with 114 lakhs in 1920-21 and 63 lakhs in 1912-13. Of the expenditure in 1926-27, 40.69 was contributed by Government, 27.95 came from funds of the local boards, 18.42 from fees, and 12.94 from other sources such as endowments and private subscriptions. The cost per scholar was Rs. 16-10-2. The average cost per pupil at different types of institutions is stated in the Table of figures given below.

In 1921, there was in Bihar and Orissa excluding the Fundatory States a population of some 16,765,000 males and 17,239,000 females. Of the former 989,461 or 5.9 per cent and of the latter 119,030 or 0.69 per cent were under instruction.

Of the male pupils, about 949,700 were attending institutions recognised by the Education Department. In the following Table are given particulars of the institutions for males, scholars in attendance and cost per head of each pupil :—

Kind and number of institutions	Number of pupils	Percentage at each institution	Cost per† pupil		
			Rs.	a.	p.
1 University .. ..	....	....	....	....	....
10 Arts Colleges	3,467	0·35	281	4	8
5 Professional Colleges	1,021	0·10	521	5	0
135 High Schools	38,197	3·81	46	7	6
563 Middle Schools	59,114	5·95	20	5	8
27,457 Primary Schools*	875,666	88·07	5	13	4
470 Special Schools†	16,702	1·69	99	6	0

*Includes 802 night schools.

†Includes 2 night schools.

†Calculated on direct expenditure only (i.e., excluding cost of direction, inspection, building, etc.)

The University of Patna, which was founded in 1917, is of the examining type. In Bihar and Orissa, as elsewhere, the recommendations of the Calcutta University Commission of 1917 attracted widespread interest in educational circles. The provision of facilities for education up to the intermediate standard before the student proceeds to the degree stage has taken the form of adding two additional classes to certain high schools in preference to that of establishing intermediate colleges.

An important step in the education of the Medical and Health services of the province was taken in July 1925, when the Prince of Wales Medical College was opened. The college teaches up to the M.B., B.S. standard and a Faculty of Medicine has been added to Patna University.

The policy of Government in regard to high schools is to maintain one such school in each district in order to set an example to high schools maintained by private agency. At present, Government have 24 such schools for boys. All government schools will teach elementary science and also manual training. Drawing is already compulsory.

In this policy and in other plans for improving secondary education, the Government receive assistance from the Board of Secondary Education, the chairman of which is the Director of Public Instruction. All educational interests, from the university downwards, are fully represented on the board which includes a representative of female education. The board meets three times a year.

English is taught in 321 of the 563 middle schools for boys. Almost all the 242 vernacular schools are now under the control of district boards and municipalities. There is a tendency for vernacular schools to develop into English schools. There is a distinct cleavage of opinion in regard to this tendency. The demand of public men and many experienced teachers is for education in the vernacular at least up to the matriculation stage, and, in response to this demand, experiments

are being made in using the vernacular as the medium of instruction in the upper classes of high schools. Parents, on the other hand, almost invariably desire their children to be taught English as soon as possible.

No specific instruction in agriculture has so far been given in secondary schools, but an experiment is about to be tried of attaching to certain schools a garden of about one-quarter of an acre. A teacher from each of the selected schools will be sent for a short course of training under the supervision of the Director of Agriculture at Sabour. Teachers will be encouraged to associate the work done in the garden with the teaching of other subjects.

Illiteracy is as great a problem in Bihar and Orissa as in other parts of India. The percentage of literates of 20 years of age and over returned in the census of 1921 was 12·6 for males and 0·7 for females. The steps that must be taken to improve the position in regard to males are known, viz., improvement in the quality of teaching, the stoppage of wastage after the completion of the first year at the primary school and the bringing of the total boy population under instruction. As regards the quality of teaching, the pay of teachers in vernacular middle schools and in primary schools is very low, ranging as it does from Rs. 30 to Rs. 50 per mensem in a middle school for a certificated teacher to Rs. 5 rising to Rs. 10 per mensem for an untrained teacher in a primary school. As regards wastage, the fact that in 1926-27, seventy-five per cent of the pupils in all schools (primary and secondary) were in the two lowest classes of the primary schools speaks for itself. As regards the third point, there has, it is true, been a rapid increase under the present voluntary system in the number of boys attending school—some 284,000 in the six years 1921-22 to 1926-27 but the percentage of boys of school-going age actually at school is still only 39·1.

An exhaustive investigation into the whole situation in regard to primary education was made by Government in 1925. It was based on programmes for the education of eighty per cent of the male school-going population submitted by local authorities. Orders were issued separately on each programme in accordance with certain general principles as to the action to be taken, chief among which is the abolition as soon as possible of the single-teacher school and direct management by each district board of the primary schools in its area except where really satisfactory local committees can be formed. The extra expenditure in carrying out all the programmes was estimated to amount to Rs. 74 lakhs. Free education in the lower primary stage would cost another Rs. 19½ lakhs. Owing to the difficulty of finding funds for this heavy increase in expenditure, the Government had to decide in 1925 against the introduction of any comprehensive scheme of compulsion in rural areas although the necessary statutory provision for this already exists under the provisions of the Act passed in 1919. Certain local bodies are, however, anxious to try the experiment of compulsion in limited areas and the Government have stated that they will be prepared to consider sympathetically any proposals to this end, the more especially as such experiments should be valuable for future guidance. So far, one rural area only has introduced compulsion, the Banki Union in Cuttack. It

is too early yet to draw any conclusions from this experiment. Three more rural areas have begun recently to introduce compulsory primary education, but it is not yet effective.

In addition to the ordinary primary schools, there were, in 1926-27, 802 night schools for males with an attendance of 17,581 pupils. The co-operative organisation is not specially identified with the movement for adult education, but it is in a special way identified with a forward policy in education as it is expected of co-operative banks and unions that they shall foster primary education in the areas in which they operate. The attention of the local authorities has again been drawn by the Government, as part of their orders on the 1925 programmes referred to above, to the advantages to be derived from making block grants to these banks and unions in view of the opportunities which they possess through the local co-operative officials for supervising the proper expenditure of such grants.

Female education in Bihar and Orissa, as elsewhere, presents very special problems and, as the figure of literacy returned at the 1921 census all too clearly shows, the results so far have been meagre. Moreover, over ninety-five per cent of the 115,785 girls who, in 1926-27, attended recognised institutions were in primary school and with the wastage prevalent in these classes comparatively few of these pupils can be expected to become literate. There has been an unfortunate period of actual retrogression in the movement for female education in the province from which recovery is only now being made. A special enquiry was made into the cause of this but no more tangible reason could be discovered for the decline in the number of girls attending educational institutions which, at no time, has been large, than the complete indifference of both men and women to the education of their daughters. During the six years 1921-22 to 1926-27 the number of girls attending school increased by only 11,600. Expenditure by local boards on girls' schools is also showing an upward tendency and the supply of trained teachers, though still far short of the demand, is steadily increasing. These are encouraging signs, but with an attendance figure which still only amounts to 4.6 of the total number of girls of school-going age in the province, it is obvious that almost everything still remains to do.

10. CO-OPERATION.

At the end of 1926, there were 7,614 agricultural societies, 93 of which were on a limited liability basis. The total membership of 205,825 gives an average of 27 only for each society. In 1912, there were 491 agricultural societies and 39 non-agricultural societies with a total membership of 27,207 or an average of 51 persons for each society.

The total working capital of the agricultural societies at the end of 1926 amounted to nearly two crores of rupees; to this amount share capital contributed 4.4 per cent and deposits six lakhs, or 3.1 per cent, of which over four lakhs represented deposits by members in their societies. The reserve fund amounted to nearly twenty lakhs or 10 per cent. The bulk of the working capital was borrowed from provincial or central banks, advances from which at the end of the year amounted to Rs. 164.6 lakhs

or eighty-two per cent of the total working capital of the societies. The amount borrowed from Government was practically negligible, the outstandings at the end of the year being only Rs. 10,743. Sixty-six lakhs were given out to members in loans during 1926. The average loan worked out to Rs. 31 a head. In 1925 thirty per cent of the loans were in relief of debt and only forty-three per cent could be described as given for productive purposes. As much as thirteen per cent was borrowed for payment of rent (three rent-paying societies having just been started) and four per cent was lent to defray the cost of marriage and other ceremonies. It was reported in 1926 that there was little change in these figures.

The movement is especially strong in South Bihar, around Ranchi and in the Cuttack and Puri districts of the Orissa division. It has gained no foothold in the Feudatory States. Elsewhere it is fairly well represented in every part of the province except in the south part of the Chota Nagpur division and the Santal Parganas where it is very weak.

Government exercise a general supervision over the movement through the Co-operative Department which consists of the Registrar, one deputy registrar, nine assistant registrars and one chief auditor. The actual audit is carried out by the Bihar and Orissa Co-operative Federation which is subsidised by Government and employs a staff of seven divisional auditors each in charge of a circle, and seventy-one local auditors. The aim is to audit each society once a year. Test audits are also carried out by the nine assistant registrars and the divisional auditors. The classification of the 6,133 societies audited in 1926 was as follows :—

A (model)	..	5	per cent.
B (good)	..	14·5	"
C (average)	..	68·5	"
D (bad)	..	10	"
E (hopeless)	..	2	"

At present there are 216 guarantee unions to which nearly 2,000 primary societies are affiliated.

In addition to audit, the federation makes itself responsible for training managers, local auditors, inspecting and bank clerks, etc. It employs a development officer who is responsible for propaganda and the production of the Federation Gazette. The federation draws its funds for these and other purposes mainly from the societies, but Government also makes a contribution. The federation holds an annual congress.

A divisional board has been set up in each of the five civil divisions to act as a centre of co-operative activity. On the average, two meetings a year are held for discussions, etc.

Of the sixty-three central banks, thirty-eight in 1926 assisted in promoting agricultural development. In addition to fostering the spread of groundnut and sugarcane cultivation, ploughs and sugarcane crushers are bought and it has recently been decided, on the advice of the Government Development Board,* that these banks can

*This Board advises Government on important questions concerning the departments in charge of the members of the Board, viz., the Agricultural, Industries, Civil Veterinary, Co-operative and Forest departments.

properly take up the purchase of manures. Grants are obtained from district boards for the development of agriculture and the promotion of primary education. In times of epidemics, the banks employ doctors and distribute medicines to primary societies.

At the apex of the credit side of the movement stands the Provincial Bank, which has a working capital of Rs. 51½ lakhs and made a profit of over Rs. 54,000 in 1926. It has an overdraft of Rs. 2,85,000 with the Imperial Bank against government securities.

Societies formed specifically for purchase and sale are unimportant. There are, however, ninety-three grain storage societies (*golas*) with a total membership of 27,564 which, together with the two central grain banks started at Sambalpur and Bargarh, made a net profit in 1926 of over Rs. 21,000. Their object is to give loans of paddy to their members at reasonable rates and to create a reserve stock of paddy for use in times of scarcity and famine.

There is only one dairy society—the Mayaganj Gowala Society. It is making a profit, but its operations are unimportant.

11. COMMUNICATIONS AND MARKETING.

Three main line railways pass through Bihar and Orissa—the Bengal and North-Western Railway in North Bihar, the East Indian in South Bihar and the Bengal Nagpur Railway in Chota Nagpur and Orissa. The mileage has increased from about 3,000 miles in 1911-12 to about 3,590 at the present time. Recently, lines of great importance to the coal fields of the province have been constructed or sanctioned for construction—notably the Central India Coal Fields Railway, the Chandil Barkakhana Chord, which will open up the Karanpura field, and a line linking the Talcher field to the Bengal Nagpur main line to Madras. Except in the south of the province, where the Feudatory States have yet to be opened up, the railway communications of the province are good, when due allowance is made for conditions in the hilly tract of Chota Nagpur.

There are over 28,000 miles of roads, of which 3,600 are metalled and 24,600 unmetalled. Local authorities are responsible for some 26,000 miles of these roads. The Grand Trunk Road and the Orissa Trunk Road and other arterial communications are in charge of the Public Works Department. The Grand Trunk Road is the great thoroughfare for cattle from up-country.

The district boards spend about one-third of their income on communications. The Government do not ordinarily make grants to the boards for public works, although such grants are freely given for the expansion of education and of the medical services and for the improvement of sanitation. A rough track which is apt to be under water during the monsoon if the village site is low lying, or a water course if it is not, connects the village with the nearest district board road. But during the dry season, from December to June, these tracks are, as a rule, quite passable for bullock transport.

A very large proportion of the foodstuffs grown, especially in the rice-growing tracts, is consumed locally. Bihar imports from Nepal, and, in

the Chota Nagpur division also, there is always a net import. The Orissa division alone has always a surplus. The net export of foodstuffs is therefore not large. Where it takes place, the cultivator usually disposes of the grain on the threshing floor to a middleman, if he is in a small way. If he is a bigger man or of the landlord class, he may both store and subsequently market his surplus but very often even the bigger men will have disposed of their grain direct to some big exporting agency which may be financing them. Each village will usually have one large cultivator who stores more grain than he requires and will lend it out if there is a shortage of seed at sowing time.

Among the regular exports, oil-seeds, sugar, tobacco, jute and other fibres and lac are the most important. Vegetables and fruit are exported to Bengal and the United Provinces and the trade in *gli* is considerable.

For the disposal of these products (except fruit and vegetables which find their way direct to the railway) as well as for general local trade there are 432 principal and 2,464 minor markets which are maintained by the landlords or their lessees, the cost being met by tolls or a rent charge. The frequency of these markets (they are held once or twice a week) and the fact that the cultivator is seldom more than from five to six miles from a market and is usually much nearer are noteworthy. There is a brisk trade in cattle, especially in buffalo bullocks, at the big cattle fairs. There is also a large trade in these buffalo bullocks between Bihar, where milch buffaloes are kept in great numbers, and Chota Nagpur, where the home-bred cattle tend to become too small for local cultivation requirements, owing partly to deficiencies of bone-growing material in the soil and partly to the pressure of the cattle population on the available grazing areas. There is also a considerable export, chiefly to Bengal, of bullocks and cows from Bihar.

12. LOCAL SELF-GOVERNMENT.

Provincial Government in Bihar and Orissa is on the same pattern as in other Indian provinces. The Governor acting with two Ministers administers the "transferred" departments, viz., Education, Agriculture, Veterinary, Industries, Co-operative Societies, Registration, Local Self-Government, Medical, Public Health, Excise, and Roads and Buildings. The "reserved" subjects are dealt with by the Governor acting with two Members of his Executive Council.

Local self-government in rural areas within the province is regulated by the Bihar and Orissa Local Self-Government Act of 1885 with subsequent amendments and the Village Administration Act of 1922.* The various local authorities are (1) District boards, (2) local boards and (3) union boards and *panchayats* under the new Village Administration Act which are rapidly superseding union committees.

* Except in the Santal Parganas where the Bengal Cess Act is in force and Sambalpur where the Central Provinces Local Self-Government Act is in force. There are also special arrangements for the local self-government of the district of Angul.

Under the first-mentioned Act, a district board is set up in 18 out of each of the 21 districts of the province. These district boards have a maximum membership of 40 persons. Three-fourths of the members are elected and hold office for three years. Not less than one-third of the remainder are required to be persons who are not salaried servants of Government. The chairmen of all the district boards except those in the Chota Nagpur division are elected. Their main duties are in regard to education and the Act prescribes that every district board shall be responsible for the maintenance and management of all primary and middle schools under public management within the district and also of medical relief, roads and bridges, sanitation, water supply and vaccination. A district board may also, *inter alia*, incur expenditure on irrigation works for the relief of famine or scarcity, offer rewards for the destruction of noxious animals within the district, hold fairs and exhibitions of cattle, country produce and agricultural implements, establish and maintain veterinary dispensaries and veterinary staff, make provision for the improved breeding of animals, make grants-in-aid of measures for improving agriculture and undertake any other local work likely to promote the health, comfort or convenience of the public. The road cess, which is fixed annually by each district board, provides about fifty per cent of the finance required and Government grants-in-aid about twenty-nine per cent. A board may raise loans for the purpose of carrying out any of the provisions laid down in the Local Self-Government Act. The provincial Government exercise a certain amount of supervision over the finance, budget estimates and the auditing of accounts of the district boards, and its hands have been much strengthened in the last respect by the passing of the Local Fund Audit Act in 1925-26.

Apart from government grants, the income of the boards has remained almost stationary for several years and the increased expenditure on education and public health—the two subjects in which the boards take the keenest interest—has been met largely from government grants and partly by incurring less expenditure on communications.

The local boards are agents of the district board. There is one local board for each subdivision* of which there are two to four in each district. The members of the local board are the members of the district board elected in the particular subdivision together with such number of additional persons not exceeding one-third of the elected members as the local Government may allow. The district boards appoint these additional members. The local boards seldom contain any officials. They are entirely dependent on the district board for funds.

Union committees are elected bodies charged with certain administrative duties in a village or group of villages. These committees are agents of the district board and are in charge of less important roads, wells, primary schools, local conservancy and sanitation and generally of

* Except in three districts in Chota Nagpur and in Angul and the Santal Parganas, where there are no local boards, and in Hazaribagh and Manbhum, where there is only one.

dispensaries. They have power to raise local taxation ; but in most cases their funds are derived mainly from grants. These committees are now being superseded by the union boards constituted by the Village Administration Act of 1922. Union boards are elected bodies, the members of which hold office for three years. The minimum number of members is fixed at three and the maximum at twenty. Each union board, subject to the control of the district board and to such rules as the local Government may prescribe, is ordinarily responsible for primary education, medical aid, conservancy, sanitation, pounds, water supply and village roads. The union board may also, with the sanction of Government, be made responsible for the maintenance of the village police. It may also undertake "any other local work of public utility likely to promote the health, comfort, convenience or material prosperity of the public, including the development of agriculture and village industries....." (Section 41 (i) of Village Administration Act.) So far this provision has proved of little practical importance.

The union board may impose a tax upon the owners and occupiers of buildings within the union provided that the amount assessed on any person in any one year shall not exceed Rs. 30 and any person who in the opinion of the union board is too poor to pay the tax may be exempted altogether from assessment. The proceeds of this tax, of fines, fees or costs levied by *panchayats* and contributions from the district board are paid into a union fund. In fact, however, union boards are largely financed by district boards. For the first two years after a union board has come into existence, its district board must make a suitable grant-in-aid and must also contribute not less than the amount of any tax imposed by the union board. By the end of 1925-26, 153 union boards had been created. But, on the whole, they have so far been a disappointment. The members of the union board are averse to imposing taxation and the creation of union boards is not popular with district boards which take the view that it is impracticable without crippling their own finances to divert to these small local areas more money than was previously being spent on them. As was truly remarked in the Bihar and Orissa Administration Report for 1925-26: "The progress of local self-government in every unit from the highest to the lowest will depend on the willingness of the people to tax themselves and to devote themselves to the service of the public without remuneration."

To complete this sketch of local self-government, it should be mentioned that a certain measure of judicial decentralisation has been attempted by the formation of *panchayats* with power to try petty criminal and civil cases. The area covered by a *panchayat* may be the whole of the area covered by a union board or it may be any number of 'circles' or subdivisions of the union board area. The members of such *panchayats* are elected by union boards from among their own members and their period of office is also limited to three years. The local Government has power to direct the establishment of *panchayats* in any area where no union board exists.

13. PUBLIC HEALTH AND SANITATION.

Of the epidemic diseases, cholera is the most dreaded especially in the densely populated division of Bihar. The mortality rate from cholera is 2·2 per thousand, the average (ten-year) mortality rate from all causes being 33·3 per thousand. The climatic conditions are favourable to the spread of the disease for many months in the year and the average mortality from this cause is nearly 90,000 annually. A special corps of ten medical officers is kept at headquarters for dispatch to epidemic centres and one hundred vaccinators are kept in reserve during the danger period which lasts from the beginning of April to the end of September.

As elsewhere, fever is the greatest single factor in the mortality rate, but it is certain that the proportion of deaths attributed to this cause—22·9 per thousand as against a general mortality rate of 33·3 per thousand—is much too high. Few of the deaths ascribed to fever are due to malaria, but should rather be put down to pneumonia, enteric fever, phthisis, *kala-azar* and other fevers. Nevertheless, throughout the province malarial outbreaks on a serious scale do occur, especially from March to the beginning of May and again from July to October. Quinine treatments are placed on sale chiefly through the agency of postmasters and, during the epidemic outbreak of 1925-26 in Orissa, 1,090 lbs. of cinchona febrifuge were distributed free.

In Orissa, diarrhoea and dysentery are very prevalent and filariasis (elephantiasis) is common. The treatment of the latter disease by injections of antimony has been found to be beneficial.

Hookworm is widespread throughout the province. Leprosy is also prevalent, but the work of Sir Leonard Rogers and others has resulted in definite hope of cure in cases taken early, and improvement in more advanced cases. Eight leper asylums are maintained and in spite of the prejudices of local authorities the treatment of lepers at hospitals and dispensaries is increasing—some 5,600 cases being treated in 1925-26 as compared with 3,700 in 1924-25. Plague is mildly endemic in certain parts of Bihar and the first quarter of each year shows a rise in mortality from it, with a more marked outbreak every four years or so, but, on the whole, there has been a steady decline in the mortality from this cause since 1905.

The average provincial death rate for the period 1916-1925 was 33·3 per thousand, but the figures for the last three years have been markedly below the average:—

1924	1925	1926
29·1	23·7	25·7

Up to March 1926, the Public Health Department consisted of four permanent officers only, the Director and three assistant directors in charge, respectively, of the North Bihar Circle, the South Bihar Circle and the Chota Nagpur and Orissa Circle. From March 1926, the department has been much strengthened by the inclusion in it of the following:—

Ten medical officers of health for special duties in cholera and other epidemics,

Three medical officers of health for the three important municipalities of Puri, Gaya and Patna,

Five school medical officers of health (assistant surgeons),

Five assistant medical officers of health (sub-assistant surgeons),

One lady school medical officer,

One officer in charge of the Public Health Bureau,

One chemical analyst,

One superintendent, Vaccine Lymph Dépôt.

The officer in charge of the Public Health Bureau is also personal assistant to the Director.

The duties which this central Public Health Department undertakes will be sufficiently indicated by the titles of the posts. The assistant directors are inspecting officers who spend much of their time touring.

There is also a central Public Health Engineering Branch which prepares schemes for water supply and drainage for both the provincial Government and local bodies. Particular attention has recently been devoted to the necessity of improving the supply of drinking water in rural areas. Capital grants of the following amounts have been allotted to district boards :

1923-24	1924-25	1925-26
Rs.	Rs.	Rs.
86,700	45,000	3,95,000

The grants are made on the basis of a percentage of the estimated cost of constructing a certain number of new wells in each police station of every district. A sanitary school of instruction is maintained at Gulzarbagh where sanitary and health inspectors are given elementary training.

In addition to this central organisation, five district boards have adopted the scale of local public health organisation suggested by Government, *viz.* 1 medical officer of health, 4 sanitary or health inspectors and 12 sanitary gangs. Government defray half the cost of such an organisation up to Rs. 10,000 in each district.

But it is not easy to get district boards to realise their responsibilities and the percentage of the boards' expenditure on sanitation to their total income shows no tendency to increase. In 1925-26, their expenditure was Rs. 6.83 lakhs or 4.68 per cent of their total expenditure.

The provision of medical relief in rural areas has proved to be a matter of great difficulty, but appreciable progress has now been made by the district boards (on whom the duty of providing medical relief primarily falls) towards the aim set before them by Government, *viz.* that there should be at least one out-door dispensary with a sub-assistant surgeon, or an officer of similar qualifications, in charge in each of the 539 *thanas* or police stations in the province. So far, 476 such dispensaries have been established at which treatment for the commoner illnesses and injuries is obtainable. But only 19 of these dispensaries are in

charge of Government sub-assistant surgeons. The rest are staffed by medical officers recruited by the district boards. For the year ending 31st December 1925, 3,442,894 patients were treated in these dispensaries. But only a comparatively small proportion of the rural population has as yet reasonable access to medical relief, as the fact that one dispensary has at present to serve an area of 194 square miles and 77,133 people only too clearly shows. Special medical facilities for women (in particular the provision of trained midwives) in rural districts are still, unfortunately, almost entirely absent.

There is some tendency for local bodies to establish dispensaries in which the indigenous systems of medicine are practised; at present, it is the policy of Government to earmark its grants-in-aid of dispensaries for those at which the western system of medicine (allopathic) is practised. These grants-in-aid have been on a considerable scale and are being continued. Up to March 1925, Rs. 3½ lakhs recurring and Rs. 12½ lakhs non-recurring had been distributed among the district boards and, in 1925-26, a further sum of Rs. 2½ lakhs recurring and Rs. 3½ lakhs non-recurring was distributed.

The higher forms of medical and surgical aid are provided by hospitals at district and subdivisional headquarters under the management either of the municipality or of the district board. These, unlike the dispensaries, contain wards for the reception of in-patients. They are chiefly staffed by government assistant surgeons whose pay is borne Rs. 3½ lakhs non-recurring by Government.

In urban areas, there are important hospitals including a large hospital for women at Patna. There are also special hospitals for women at Gaya and Bettiah in charge of doctors belonging to the Women's Medical Service. But these institutions can contribute but little to the medical relief of the rural population.

A great advance has recently been made in the facilities for medical education available in the province by the establishment of the Prince of Wales Medical College at the Patna General Hospital. The college is affiliated to the University of Patna and students can obtain the degree of M.B., B.S. The first year class was opened in July, 1925. This new college has first class equipment, and should be a most important factor in providing trained medical men for the country-side. In addition, the province maintains two medical schools for the training of sub-assistant surgeons. One of these is at Cuttack in Orissa and the second is now at Darbhanga in Bihar, where it was moved from Patna in 1925 in order to make room for the new Medical College.

